5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

actually has provided the Orokaiva with a reliable and substantial cash income for some years. This is true to a very minor extent for the third cash crop promoted on a major scale, copra, which was grown especially near the coast. The coffee is processed and sent to a co-operative factory as parchment, for which purpose many villages own one or more hullers. Copra is supposed to be dried in driers built in the villages, but the one I saw in Inonda had broken down and seems unlikely to be repaired.

Clothing. The traditional Orokaiva costume was a skirt for women and a perineal band for men (Williams 1930: 32–4). Boys went naked until some time before puberty, girls until after puberty seclusion. These garments were made of barkcloth obtained from trees which were mostly grown in gardens for this purpose. Larger garments were used for wrapping round the shoulders in cold weather, and also for shrouds. This mode of dress was abandoned in the 1950s, so that today the Orokaiva buy their clothes almost entirely from trade stores and at mission bazaars. Traditional dress is used for dances, initiation ceremonies and other special occasions. For this reason bark-cloth trees (such as the *ajimo*) are found rather infrequently in gardens today. Bark-cloth is still being painted with decorations in traditional style and with a mixture of traditional and trade dyes.

Housing. Villages are in flat clearings where the grass is kept scrupulously cut and from which the women regularly sweep away rubbish. Houses (*bande*) are built in two facing rows, each house normally being occupied by one nuclear family. The roof of sago thatch slopes down from a central ridgepole. Wall construction has been in various styles since Australian contact, but today vertically set sago-branch midribs are becoming old fashioned in some areas and vertically laid shingles, about 6 ft. by 5¾ ins., are being adopted in villages desiring to show they are tuned in to modern life. A great number of tree species must be used for the various parts of the house. Materials are taken as much as possible from reverted gardens which contain small trees. For a number of purposes large trees with trunks of high-quality slow-growing wood are considered essential. These trees have to be obtained from areas of bush much older than the usual reverted gardens. On the Mount Lamington foothills, such areas are very scarce. Trees of this quality tend to be the subject of gift exchange as between families, a subject to be discussed below.

Though it is each man's responsibility to build his own house, it is usual to call on helpers, especially sons, brothers and brothers-in-law, to help with construction. Recent changes in house construction include the increasing use of nails, though not for flooring; a remarkable increase in house sizes; the change in wall construction already mentioned, and a number of measures to 'improve' hygiene: lavatories, rubbish holes, pens for chickens, windows. The windows, an innovation promoted by the government to combat tuberculosis, are considered too uncomfortable in cold, wind or rain. Accordingly, they are always covered over with pieces of timber which can be removed if the patrol officer insists.[6]

Bachelors' houses (*oro*) are of precisely the same size and construction as the ordinary *bande*. The more prominent men of the village build themselves small meeting platforms, covered with a roof but lacking walls, for the entertainment of visitors (*anara*). In the gardens, we find small houses with an earth floor, no walls, but a platform just below roof level. People sit in these garden houses

[TEXT CONTINUED ON PAGE 25]

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5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

TABLE II/4

CHANGES IN HOUSE DESIGN, HOUSE CONSTRUCTION AND DOMESTIC AMENITIES IN SIVEPE, 1936–1966
(Comparison between standards reportedly applied on four successive village sites)

Elements	1. *Pusahambo (pre-war)*	2. *Pamba (between war and eruption)*	3. *Old Sivepe (after eruption, until 1965)*	4. *New Sivepe (1966)*
Floor level	Raised on posts	Raised on posts	Raised on posts	Raised on posts
Flooring material	Betelnut, wide gaps	Betelnuts, no gaps	Some betelnut, some blackpalm	Some betelnut, some blackpalm
Windows	No windows	No windows	Small windows	Large windows
No. of rooms	Three	Three	Three	Three
Walling material	Split sago	Split sago	Split sago	'Timber'
Nails: Framing	Nil	Younger people	General	General
Nails: walls	Nil	Nil	Nil	General
Shrubs	Beside houses	Beside houses	Beside houses	To mark paths
Betelnut	Planted	Planted	Planted	Planted
Cocunut	Few	More	More	More
Waste disposal	In gully	In gully	In gully	Rubbish holes
Pigs	Present	Present	Present	Absent
Hen houses	Absent	Absent	Absent	Pens built
Lavatories	Absent	Absent	A few	General
Floor area	'Very Small'	'Bigger'	'Much bigger again' (200 sq. ft.)	'Big' (375 sq. ft.)

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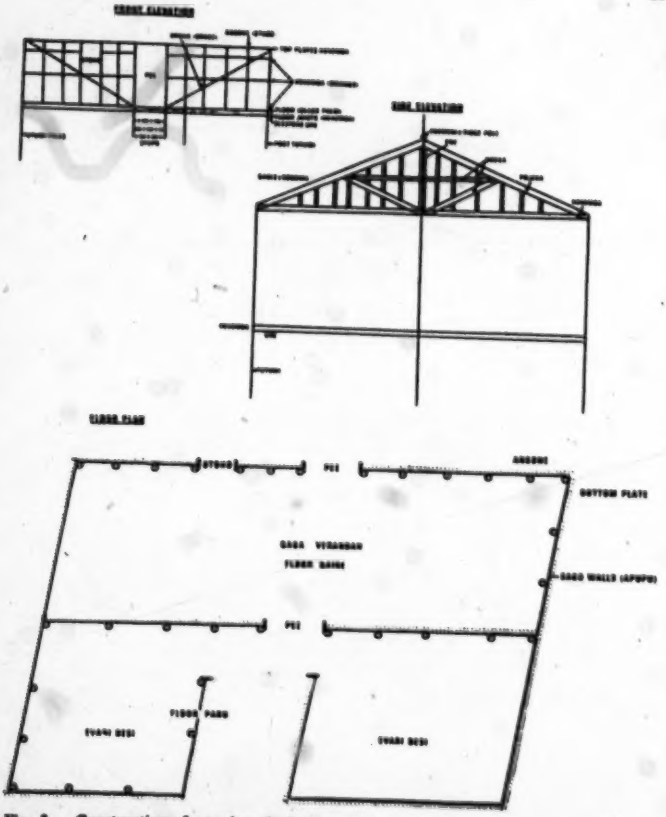

Fig. 3. Construction of a modern Orokaiva house.

(*hawau*) in the heat of the day, and sometimes sleep there at night. Yams are stored under the roof. 343

Plastic Arts. As Mauss (1967: 96) has suggested, the best starting point in the description of plastic arts is the decoration of the body. Even though the elaborate hair dressings described by Williams are no longer seen for everyday wear, every opportunity is taken to decorate the hair in some way, especially with a few feathers. It is at the ceremonial dances that the full range of body decoration is seen: face painting, feather head-dresses, ornaments. The latter are worn on the forehead, held in the teeth, suspended from ears and nose, as necklets and as armlets. 302 301

5: Schwimmer E-4,5 (1966-1967) 1973
OJ23 Orokaiva OJ23
Mountain Orokaiva

4 Orokaiva: *tauga*; botanical: *cycas media*; Orokaiva: *puga*; botanical: *terminalia okaria*. There are two varieties of breadfruit, called *oga* and *eumba*. They are both somewhat unusual but I failed, in spite of sending samples, to obtain indentifications.

5 Details of garden production are given in Table II/3. Rainfall at Sivepe and Inonda is shown in Rimoldi 1966:109; Crocombe and Hogbin 1963:100.

6 A plan of a contemporary Orokaiva house is shown in Fig. 3. Recent changes in house design, house construction and domestic amenities are summarised in Table II/4.

7 See Tables II/5 and II/6. Williams' data are taken from an unpublished manuscript and appeared first in Schwimmer 1969:226. I have discussed the Orokaiva division of labour in more detail in Schwimmer 1969: 145–50 and explained the apparent discrepancies between Williams' table and Waddell's and Krinks' statistics.

8 Crocombe and Hogbin (1963) provide a list of prices prevailing in this trade. They report that there is still some trade in shell ornaments from the coast and in feathers for head dresses from the mountains. Informants at Eroro, on the coast near Buna, gave me details of their traditional trade with Managalasi of the nearby mountains. A Sivepe man who has hunting rights to land near Ajoro goes there to hunt birds and sell the feathers. His chances of finding any of the more valuable birds near Sivepe are remote. The difference in Sivepe and Inonda patterns (i.e. the foothills and the alluvial plains) appears from the data in Table II/7. It will be seen that Sivepe stock is to a far greater extent inherited, whereas Inonda stock is to a far greater extent acquired through brideprice (value $13), barter (value $21.60) and other exchanges (value $13.70).

9 Dr. Waddell has provided a detailed statistical table of the geographical distribution of subsistence produce (Waddell and Krinks 1968:218). This table provides clear and detailed information on the geographical range of the Sivepe exchange network. A full descriptive account may be found in Schwimmer 1969: 41–69.

10 An interesting picture of this period of Orokaiva history is drawn in Beaver, 1916.

11 Full information on these cults will be found in Chinnery and Haddon (1917) and Williams (1928). If has escaped previous commentators that Bia, who started the taro cult, was employed for some years by Monckton, and participated in various punitive enterprises with an alacrity most pleasing to his master. He was described in Monckton's books in rather revealing detail (e.g. 1921: 185, 268, 269, 295, 308; 1922: 10, 13, 65, 136, 172, 214, 216). For the present relationship between the Orokaiva and the missions, see Schwimmer 1969; 123–33.

12 The general subject of Orokaiva economic development since 1951 is very fully covered in numerous bulletins published by the New Guinea Research Unit from 1963 to the present, and also in Schwimmer 1969. A general indication of the investments in socio-economic development is given by a table of public expenditure in the territory of Papua for the years ended 30 June 1961 to 1965 (Commonwealth of Australia: *Annual Report of the Territory of Papua for the period 1 July 1964 to 30 June 1965*, 179). The growing emphasis on educational services is perhaps the most notable aspect. Table II/8 indicates the pattern of school attendance. Table II/9 summarises the activities of the Higaturu Local Government Council; roads, water supplies and clinics are perhaps the projects most relevant to development.

13 The three villages have been sketched in figures 4, 5 and 6. Education and occupational experience at Sivepe and Hohorita are analysed in Tables II/10 and II/11.

461 recorded every afternoon, when each able-bodied adult was asked
125 how he had distributed his working hours. Of the population of 50, 25 were able-bodied persons over the age of 16.[1] These fall into 2 distinct categories according to age. Seven householders are between the ages of 45 and 65 years, and the other 5 between 25 and 35 years of age. There were no younger men or boys over 15 years in the village. Five of the women were aged 45 or more, 5 were between 25 and 30, and 3 younger women whose husbands were absent in employment, were staying with their kin in the village. One Jegase woman was a total cripple.

857 Nine of the 24 children attend school and 11 are 5 years of age
[871] or under. The rest, 2 boys and 2 girls in the 10-15 age group gave only intermittent assistance in garden work. The boys would often go hunting but were not engaged in productive work as regularly as their elders. The girls had a relatively heavy schedule of domestic chores.

592 The household containing a nuclear family is the basic unit of production and consumption. Members of an expanded family usually make their gardens on adjacent plots and the men usually co-operate in the heavier clearing work. Its members usually travel together to their gardens, but each household then cultivates its garden [462] alone. Apart from the harvesting, which is the task of women, the division of labour between sexes in gardening activities seems to be flexible in each household. Women assist in clearing undergrowth for new gardens and men join them in planting and weeding. It will be seen from Table 4 that men spent nearly as much time as the women in subsistence gardening during our survey. A

342 House-building is carried out generally by the householder and
476 any adult sons, with only occasional assistance from a neighbour
[462] or another kinsman. Wives sometimes help to prepare materials such as sago thatch for the roof.

[824] Larger work-groups than these are seldom mobilized for subsis-
[461] tence activities.[2] One or 2 men can readily clear enough secondary growth for their own needs and little co-operation is

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[1] Included among these were 1 man whose activity was restricted by tuberculosis, and another very old man. However, both maintained their own gardens.

[2] E. Waddell (personal communication) suggests that assistance with house-building is not 'occasional' but 'considerable' especially with making roofs; he also points out that large work-groups are assembled for harvesting yams (which do not need to be left in the ground for storage). Neither type of co-operation was in evidence during our short survey of work patterns.

A, [See Category 461, p. 28--Analyst]

342 [476] required to build the short pig fence protecting the average garden. A house is replaced by intermittent work on construction over a period of several weeks.

476 Co-operation with households outside the expanded family is usually on the basis of assistance given for a day or two by an individual to fulfil some kinship obligation or to help a neighbour who is sick. Any assistance a man receives usually comes from individual kin rather than a working party composed of
614 his agnates. This may be because Sivepe is one example of the type of Melanesian societies where clans or their segments 'are small and communities composed of several, permitting local endogamy'' and co-operation with local kin and affines dilutes the strength of the unilineal group (Brown 1962:68).

461 The work patterns we recorded are summarized in Table 4. The [164] figure for the time taken up by sickness (including caring for the sick) was affected by the facts that during the survey 2 householders suffered from lengthy bouts of malaria (1 was hospitalized) and that some women needed to attend to their sick children; the figure for travel was affected by the absence for several days of 1 householder and his wife who walked to Popondetta where they had business at the District Office.

132 The extreme weather conditions experienced during our survey - 461 26.3 inches of rain in 1 month with 25 wet days followed by a long period without rain - restricted both the range of subsistence activities possible and to some extent the time available for them. The amount of time devoted to subsistence and cash crop gardening [797] was appreciably lower during each of 3 weeks which were marked by the celebration of non-traditional festivals. Several villagers were among a group of 100 people baptized as Anglicans at Sasembata Mission.

795 During the week this occurred the women of the sample devoted 461 more time to preparing for and attending the ritual than to economic activities. The men also spent more time than usual in the village, several of them building or repairing houses. Most of the men spent several hours watching the baptism itself. Although the baptism differed from the life-crises traditionally celebrated by feasts, a number of small independent gatherings to mark the transition were held afterwards in the village by the close kin of those baptized.

796 Religious observances were accorded a little more time during 461 the week of Christmas than in normal weeks. There were no festivities within the village to mark the occasion and church attendance was the only organized Christmas celebration except for ceremonial at Saiho which a few Sivepe people attended on
461 Boxing Day. Several people were disabled by attacks of malaria at the time but few of the others considered these 2 days as

166 Individual mobility is still high, as we have already noted.
[342] Mobility is facilitated by the fact that material for housing - wange timber framework, blackpalm floor, walls and roof-thatch from sago trees[1] - is usually readily available and houses have an average life of only 4 years.

36 The patrol of 1948 which found this area 'literally a mass of
[62] small hamlets' alludes to a possibility that the proliferation of these groups had become conspicuous only 'since the Japanese invasion'.[2] The long-term trend after the 1951 eruption, the next catastrophe to cause displacement of population comparable with the wartime upheaval, was towards effective consolidation instead of the proliferation of small groups, such as the scattering of post-invasion days.

36 When people began to leave the evacuation camp there was a
178 spontaneous trend, which was encouraged by officials, towards
62 building larger villages or, alternatively, clusters of 'hamlets'
[177] within sight of each other (Belshaw 1951:5 ff.).

Plant (1951:6) and Belshaw (1951:6) suggested the following reasons for this tendency: that reconstruction would be easier if large numbers of neighbours co-operated; that the renewed interest in co-operatives led to a desire for larger groups; that the example of Ilimo Camp had given people the notion that larger groupings were correlated in some way with higher standards of living; that the Europeans, whose goodwill was now evident, favoured bigger settlements; and finally that their common disastrous experience had reinforced their sense of unity.

62 Although the present-day villages are smaller than those established at the start of the resettlement before the danger area had again been occupied, they are considerably larger than their counterparts of pre-eruption days: Belshaw (1951:2) says that the population of 'hamlets' in the area was of the order of 20 to 80 and the population of the 'hamlet group' under one name ranged from 150 to 400. At present in the Saiho Census Division the average population of the residential unit, in nearly every instance a nucleated village, can be no less than 175.[3]

[613] [1] Some informants stated that materials (except sago) could be collected from any village members' land but most claimed they sought wood only from lineage land unless invited to use trees by particular kin from other groups.

[2] This report was probably the major source of Belshaw's and Keesing's information on the pre-eruption situation.

[3] We do not know the average size of a group of villages known by a 'hamlet group' name such as Awala, Waseta, etc.

station with Boru on the main road near Awala and passing within a mile of Sivepe, but it was not completed by the onset of the wet season. It was intended that this would be used by the OCCS and other purchasers of produce. This was the main reason for the Sivepe people's decision to move their village to a site within 200 yards of Sasembata mission station.

Sasembata mission is a head station of the Anglican mission. Among its facilities are a church, administered by an Orokaiva priest, a hospital and infant welfare clinic run by a Papuan medical orderly but supervised from the Administration hospital at Saiho, and a primary school with 400 children on the roll.[1] The school includes classes up to Standard V and is headed by an Australian with the assistance of ten Papuan teachers. A small trade store is operated by Oro Ltd at Kongohambo village adjoining the mission station.

Sivepe itself is laid out as a line village, with lineage members tending to occupy adjoining houses (see Map 4). The houses have a mean size of 229 sq ft and are built entirely of local materials, with the exception of nails which are now commonly used.

Three clan branches are represented in the village and two of these, the Jegase and Timumu clans,[2] comprised the survey sample (55.3 per cent of the total village population of 114 in January 1964), the characteristics of which reveal them to be representative of the population as a whole.[3]

The population of the sample declined by 20.6 per cent, from 63 to 50 persons, over the survey period. Ten of the 17 departures migrated to other villages and the rest sought wage employment within the district or in Port Moresby. This continuing out-migration intensified certain characteristics of the village's labour force, for by January 1965, 37.8 per cent of the potential adult male labour force was absent, the majority on a long-term basis in unskilled or semi-skilled work or low-ranking positions in government service.[4] In three cases, wives and children remained in the village and were supported by close kin. In January 1965, there were only two men remaining in the 20 to 34 years age groups.

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[1] An estimated 80 per cent of the children in the area receive some schooling.

[2] Clansmen also reside in twelve other villages, all within a radius of 3.7 miles of Sivepe.

[3] See Appendix 1 and Fig. 4:1.

[4] See Appendix 2.

A, [See Category 163, p. 307--Analyst] B, [See Category 162, p. 39--Analyst]

C, [See Category 166, p. 308--Analyst]

511 [207] [291] [178] [177] Only one man owns a mosquito net and there is only one transistor radio in the village. Some of the older people still wear tapa cloths but new ones are seldom made now. The more common form of dress is a pair of shorts, a skirt or a laplap, the skirts being mostly sewn at mothers' union sewing classes run by the Anglican mission at Sasembata.

411 [435] Two men in the sample own shotguns, costing $58.75 and $59.75. These are the only items in the village representing large capital outlays and several other men had made contributions of $2 and $6 towards their purchase, so they can borrow them in return.

342 178 None of the houses conforms to the traditional Orokaiva style, but all are built wholly of local materials. They contain no raised platforms for sleeping, no shelves for food storage, and no cooking facilities other than an open fire. One man has built a 'kitchen extension' to his house while several other households cook primarily in shelters outside. Also, one man has built a simple table and bench outside and some members of the household occasionally eat at this.

312 487 514 A creek running beside the village provides the water for bathing, cooking, laundering, washing dishes and pulping coffee. Paths are narrow and unimproved despite constant use so that they become difficult to negotiate in wet weather. Not all households have pit latrines and those that do only use them irregularly. Small children often defecate on the village surrounds and standing water in various parts is a further health hazard.

Inonda

133 134 [31] Inonda lands run from the low plains (200 feet above sea level), beside the Sambogo and Girua rivers, into the foothills of the Hydrographers Range. They include a variety of landforms, soils and vegetation - one-third of the village lands are covered with soils of the Popondetta family, which are well-drained sandy loam volcanic soils, supporting grasslands of Saccharum spontaneum-Imperata cylindrica alliance; one-fifth consists of coarse-textured riverine deposits which are moist, apparently fertile and support forest and regrowth. These are preferred for food gardens, although gardens are also made on the lower valley slopes of the Hydrographers, where the soils consist of well-drained clay loams covered with dense forest or secondary growth. The soils of the foothills are shallow and stony, supporting lower montane rainforest and, as with the grasslands, this area is used only for hunting and foraging. The CSIRO survey classifies most of the Inonda lands as having moderate land-use potential.

Like Sivepe, both sites of Inonda were laid out as line villages. Here the tendency for grouping of kin is more marked but still not rigid (see Map 6). The houses, with a mean size of 282 sq ft, are built largely of local materials, but incorporate some exotic items including nails, and, in certain cases, corrugated iron roofing from nearby wartime dumps. In addition to the residences, there is a rest-house, a copra-drier, a small trade store and a chapel. Brief weekly services are held by a villager who was once a mission teacher and who also owns the store.

In January 1964, the resident population of the village was 35, with 16 adults, a drop of seven since the time of Crocombe and Hogbin's survey (1963:58). The nine households had an average of 3.9 individuals or 1.8 labour units. No births or deaths occurred during the survey but there were three arrivals and seven departures giving a total of 31 people, including 16 adults, in January 1965. In addition, several people from other villages stayed temporarily with kinsmen in Inonda. At first, there were two local clan branches in Inonda, the Andirihaha and the Jego'undi, the latter being represented by a single family.[1] When the village moved in 1964 the Jego'undi man, having virtually no rights to land near the new site, decided to move instead to the nearby village of Mosou, which is built on his land. He, his wife and four daughters were from this point (July 1964) excluded from the daily interviews, which explains the most prominent change, namely the loss of female children, in the age-sex structure diagram (Fig.4:2).[2] In contrast with Fig. 4:1 for Sivepe, Fig.4:2 shows neither males nor females in the 15 to 19 years age group; the largest concentration of adult males is in the 20 to 24 years group, where Sivepe has none. The proportion of long-term absentee adult males was 16.6 per cent in January 1964 (i.e. two out of twelve) and 25 per cent in 1965, the rise being due to the departure of the Jego'undi man. One absentee is normally resident in Port Moresby and seems unlikely to return except on retirement; the other, his brother, lives less than three miles from Inonda at Ijika near Hohota, which is his widowed mother's village, and he constantly asserts his intention to return to Inonda.[2]

The major agnatic links of the Andirihaha people are with Hohota, but extend to Kakandetta and Hanakiro, ten miles away, while

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[1] A third local clan branch, the Horemba'undi, is represented in Inonda by a single household, which is resident through affinal ties and it has no right to Inonda lands, although it is allowed to make food gardens there.

[2] i.e. two of the three 'absentees' continue to reside in subsistence villages, unlike the Sivepe absentees who are all in, or seeking, full-time wage employment elsewhere.

[TEXT CONTINUED ON PAGE 55]

A,[See Category 162, p. 55--Analyst] B,[See Category 162, p. 39--Analyst]

8: Waddell & Krinks E-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

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Plate 3. Sago-making - possibly the most arduous of subsistence tasks and invariably a group enterprise.

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Plate 4. Sivepe - women are responsible for keeping the central area free from weeds and refuse, as part of 'Council work'.

433 hunting. The little time devoted to the preparation of tools for
512 the main subsistence enterprises reflects the degree of technological substitution which has occurred since contact.

Construction and repair of houses normally continues throughout the year, here occupying 1.6 hours per man-week. In Sivepe such activity declined during the course of the survey as plans were formulated to transfer the village to the new site. Of 13 houses whose occupants were not newcomers to the village, 4 were completely rebuilt during the year and, in addition, 2 completely new houses were built and a number of extensions and repairs made to others. This 'crude birth rate' suggests the life of a house to be about [342] 3.25 years. Since each house takes about 110 man-hours to build (including the gathering of materials), about 0.6 hours per man-week must be devoted to reconstruction in a normal year. In Sivepe about 0.9 hours were devoted as a result of additional houses being built, the balance (0.7 hours) accounting for repairs and minor extensions.

[252] Household tasks occupy 5.3 hours per man-week, cooking predominat-
[462] ing with 5.0 hours. Of necessity, they vary little through the year.[1] Much of the time taken up by cooking involves simply tend-
[372] ing the fire on which the food is being prepared and it is then that the women often work on their string bags. Most firewood is obtained as a by-product of clearing, suitable lengths of timber being stacked in the garden to dry out and then carried to the village as required.

All the above subsistence activities (food production, construction, handicraft work and household tasks) can be described as 'productive' in that 'the purposeful alteration and combination of physical material' (Udy 1959:2) can be discerned in them. Together they account for 26.6 out of the total of 30 hours per man-week devoted to the subsistence sector of the economy.

512 Only 3.4 hours per man-week are spent in fulfilling social
182 obligations. Although categorised here as non-productive activity, it should be stressed that ritual and informal social interaction are part of the fabric of the total economic system and the kinship networks which form the framework for these interactions serve as the major mechanism for distributing goods produced within the subsistence economy.

171 Belshaw, in discussing Melanesian exchange, states (1965:35):
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> A primary point to note is that a very high proportion of social contacts between adults is accompanied by gift-giving.

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[1] The figure for cooking in period I is an estimate, derived from averaging the figures for the following periods, since relevant records were not initially kept.

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[462]
[286]
[285]
[824]
[462]

(ii) Other subsistence activities. The other subsistence activities are construction of houses and other buildings and the preparation of tools and equipment such as spears, sleeping-mats and string bags. The latter activity occupies, on average, about 1.5 man-hours per week with no seasonal variation. Over one-third of this time is accounted for by women making string bags. More than one-quarter is spent, mostly by women, collecting and weaving pandanus leaves into mats and over one-tenth in sewing clothes. Men's tasks in this sphere include the making and repair of axe-handles, spears and fishing nets and the weaving of coconut-leaf baskets. House construction is carried out almost entirely by men, except for the preparation of roof-sheets from sago-palm leaves, in which women may assist, and it occupies about 2.0 man-hours a week. During periods I and II, several people were building houses on the new village site. For the most part, such activity was not intensive; some continued to live in the old village and from time to time worked on their new houses, while others built temporary houses on the new site and lived in these while erecting their permanent houses. Not all construction, however, was subsistence oriented. In July and early August the men spent 189.6 hours erecting the copra-drier and in period III the entrepreneur spent 3.2 hours on his new trade store. (Also in period III, 33.1 hours were spent building the chapel, but this was recorded as 'church work' and is included under 'external agencies' rather than 'construction'.) The amount of time shown as spent on construction of houses, garden shelters and the copra-drier is much higher than the time that would be spent on building in most years. This is due to the unusual circumstances during 1964 of the decision to build the copra-drier and the reconstruction of the village; normally, individuals might build new houses only once in five years. Thus, the annual rate of house-construction would be only about one-fifth of the 1964 rate.

[342]

The amount of time expended by individuals in household tasks - cooking, washing and collecting firewood - as shown in Table 7:3 - is understated. Owing to problems of observation during periods I and II when the village was on two sites, cooking was rarely recorded. As a rule, wives prepare two meals a day; breakfast requires 0.8 hours and the evening meal takes 1.5 hours on average. When a midday meal is prepared, the mean time taken is 1.0 hours. Thus, wives are likely to spend at least 2.3 hours a day in cooking, or 16.1 hours a week, and it is clear that cooking is the most time-consuming task for them. When the figures are calculated incorporating this average figure, the mean time spent by individuals on household tasks appears as 10.1 hours rather than 3.8 hours. (This does not include the important contribution made by children, particularly young girls, who, from the age of about five, fetch water and wash pots and, by the time they are about twelve, assist in preparing meals.)

[85]

8: Waddell & Krinks E-4,8 (1964-1965) 1968 OJ23 Orokaiva OJ23

partially counteracts the effect of the reduced travelling time. However, all of the most distant gardens were fully harvested by the time the village move was completed.

Other subsistence activities also show a significantly lower proportion of time spent in travelling from the new site compared with the old: this is because almost all construction, including the copra-drier as well as houses, took place at the new village. Some people reduced their travelling times at an early stage by erecting temporary shelters on the new site to live in while building their homes. By the time of period III, the other subsistence activities were restricted to those pursued in the village, such as making mats or string bags. The reduced time spent walking from the new site to work on cash crops results from a concentration on copra production within or adjacent to the new village at the expense of work in the more distant coffee gardens. The established coffee gardens are about twenty minutes' walk from the old site but forty minutes from the new village and the distance involved resulted in a decision to establish new coffee gardens nearer the new village. As described,[1] the first choice was land about twenty-five minutes' walk away, but eventually all but two men decided to utilise the food gardens only five minutes from the village. The other two planted coffee near the Sambogo river where there is plentiful water for pulping and washing the cherries.

The apparent reduction in travelling times for household chores is illusory. The observers were able to cover activities such as cooking far more completely at the new site; the distance to the nearest water supply was not diminished by the move. The distance to the aid post where the infant welfare clinic is held was, however, considerably reduced.

Three categories of activity show an increase in time spent travelling. This reflects more frequent journeys after the move to places further afield, such as Popondetta, Saiho and Kendata, but this increased frequency was not a function of the move itself. During period I, when most people were still resident in the old village, most of the social occasions took place there or in nearby villages whereas, later in the year, feasts were attended in more distant places.

The performance of individual tasks

On a number of occasions, detailed observations were made of the time involved in carrying out various tasks and the results are shown in Table 7:14. Each activity has been divided into different phases: travelling, resting and eating, performance of the main task,

[1] See p.59.

[TEXT CONTINUED ON PAGE 157]

226 476 branches and to drive the fish into the nets. On both occasions during the survey over twenty people were involved. Operations such as these are initiated by the older men. Participation is voluntary and seems to be based on residence as much as kinship.

342 461 476 Construction of houses generally involves some collaboration in erecting the timber frame and in preparing roofing sheets from sago-palm leaves, but much of the construction is carried out by the householder alone. When assistance is received, it may be from a wide range of kin, including agnates, matrilateral kin and affines. The main reason for the size of work group shown as involved in construction at Inonda is the erection of the copra-drier when all the men in the village collaborated.

461 178 [245] It is worthy of note that, except for fishing and sago-making, all activities involving larger work groups are non-traditional activities directly associated with the monetary sector. The largest work groups occur in copra-making and the next largest in cultivation of coffee. As described above, copra-making was initiated by the entrepreneur as his own project but subsequently others combined to make it a village project. Cultivation of coffee is carried out usually by members of the household that owns a garden, sometimes assisted by other kin who have no cash crops or by young unmarried men. There is, then, a clear differentiation between traditional and post-contact activities in terms of the organisation of work groups.

The activity patterns of selected individuals (see Table 7:16)

166 Isemba. This man is unmarried, aged 21 and lives in the household of his elder brother. He reached standard V at Ururu mission school and began training as an aid post orderly at Saiho hospital, but left after eleven months, feeling that his current conditions and future prospects were not satisfactory. He then lived for some months with a relative of the same lineage at Ijika, returning to Inonda for several weeks during periods I and II and remaining permanently from late August onwards. In total, Isemba was absent for 85 days, 92 per cent of which were on visits either to his lineage brother or, for shorter periods, to other relatives. For 3 of the remaining 7 days he was sick and stayed at Hahema village, 2 days were spent at a feast, 1 at a party and 1 looking for work at Popondetta.

[461] [464] Isemba's observed activity patterns seem fairly representative of the behaviour of young unmarried men in the area. Probably his attitudes are also quite widely shared: although he frequently helps his brother and other kin in Inonda and other villages in subsistence tasks and cash cropping and will almost certainly settle in the village when he marries,

8: Waddell & Krinks B-4,5 (1964-1965) 1968 OJ23 Orokaiva OJ23

437
476
[460]

The exchange of labour services

Table 11:15 presents the detailed composition of labour services given and received by the Inonda people. These services have been discussed in general,[1] particularly with reference to their seasonality. It is worth emphasising here the comparatively small extent of mutual collaboration in work. With some 17,000 working hours available (on the arbitrary basis of 6 man-hours for each of the 2,782 man-days on which exchange data were collected), less than 450 hours were actually spent in assisting others, either in or outside the village, although a few more hours were spent working together in communal tasks such as building the copra drier and chapel.

As was pointed out, 46 per cent of the acquisitions of labour assistance in subsistence tasks is in sago-making. There are two [222] main reasons for this. Firstly, it requires several days of intensive and exhausting labour in order to beat the starchy pith from the felled trunk before it spoils in the hot, moist climate and before wild pigs can get at the opened trunk at night. Secondly, a single tree provides enough food (supplemented by garden produce) to support several families for some weeks and the produce of a [462] single tree is distributed by the rightholder(s) particularly to those who assist in its preparation. Due to the exhausting nature of the task, men provide the bulk of the assistance. There is no clear pattern of kinship groups operating: assistance may be requested and received from the immediate family or from among patrilateral, matrilateral and affinal kin. Assistance received in sago-making exceeds disposals by 93.4 hours, reflecting an inflow from other villages. This was received mostly from two young Sewa men, who also contributed over one-third of the total assistance received in house construction.

Tasks involved in the construction of houses account for about 10 per cent of disposals and 15 per cent of acquisitions of all subsistence services. This is undoubtedly higher than it would otherwise be owing to the reconstruction of the village. Even so, the amount of assistance given in the process of re-building is probably understated, as much occurred outside the recording periods. The bulk of the construction services fell into periods I and II and the move was completed by the beginning of period III. [342] One-third of the assistance in construction was in making roof- [824] sheets from sago leaves.

About one-quarter of both acquisitions and disposals of subsistence services is in garden tasks - mainly fencing, clearing and planting taro. In most of these there is an excess of acquisitions,

[1] See pp.235-44.

CHAPTER 3 - OTHER PROPERTY

Housing

342 319 423 All materials for building the Inonda village were acquired from land and trees in which the people hold rights of one form or another.(1) The framework is usually made of wange saplings and the floor of black palm. Sago thatch is used for the roof and split sago midribs for the walls. Saplings for the framework may be obtained from any virgin bush or second growth though most people said they used saplings which they had cut during the course of clearing new gardens.

Sago for the roof and walls must be acquired from one's own trees unless they are inadequate, in which case it is necessary to negotiate with someone who has a surplus. Of the eight houses in the village, sago for three of them was obtained from trees belonging to the household head and for three others from trees belonging to the father of the household head. One, who has only permissive status in the village, obtained sago from his daughter's husband's father's trees. The last man has insufficient trees and obtained thatch from trees on his mother's clan's land in a neighbouring village.

Tools and equipment

412 422 Very few agricultural implements are used. Each adult male has an axe for felling bush and every man and woman has a bush knife which is used in weeding, clearing and harvesting. Planting is done with a digging stick. There are no other gardening implements in regular use.

412 435 The axes and knives were bought from local trade stores and though actual prices paid are not known, current re-

(1) With the exception of a few sheets of iron used for ridging and eaves which were collected from ex-army dumps.

The inheritance of property

342 768 Traditional housing has a life of only about four years. It is simply constructed and does not call for any great expenditure of either effort or materials. If the household head dies, his wife and family may continue to occupy the house, though if there are adult sons they will usually dismantle their late father's house and rebuild nearby. If the wife remarries her new husband must provide her with housing.

428 Replies to questions about the inheritance of tools and equipment were unanimous. Those who had one son (real or adopted) said these things would descend to him alone. Those with more than one son said they would go to the first-born who would divide them among all the sons, though he should make some provision for his sisters if they were living at home. Those with no children or with daughters only said that their chattels would go to the sons of their eldest brother. The one exception was a man with four daughters and no sons. Neither did his brothers have sons, although his late sister has surviving sons in a village about ten miles away. He says that if he does not have a son before he dies, he will leave his property to his eldest daughter to distribute among herself and her sisters.

The proposed inheritance of cash savings and traditional valuables followed the same pattern as that of tools and equipment, though informants state that the first-born son need not necessarily actually divide the estate, but will normally merely take care of it as trustee for his siblings. He is then obliged to meet their obligations in respect of bride-price and other exchanges from the common pool. This practice has in fact been followed in all instances checked with the villagers, though they do say that it is not contrary to custom to share the estate among the beneficiaries.

While it is said that a man's dogs are usually inherited by his eldest son, pigs and fowls appear generally to be consumed during the feasting associated with the death. One exception noted during our stay was a large pig which had been "earmarked" as part of a bride-price exchange. When the owner died this pig was in fact reserved for the bride-price, though his other pigs were killed for the funeral feast.

	Men	Women	Average
Hunting, fishing and foraging: Taken as 25% below pilot survey (as hunting increased during mourning and fishing increased during dry season; foraging not fully accounted for as often done in the course of other activities). Hunting all by men, fishing mostly by men, foraging mostly by women	30	8	19
Housebuilding: House rebuilt about every 4 years. Assuming that it takes about 16 man-days to build a house.	4	-	2
Total subsistence activities:	74	132	103
Cash cropping: Assessed time needed to maintain and harvest area planted (1.85 acres) averaged over all adults.	6	6	6
Council work: Road work say 4 days per man per year.	4	-	2
Church: Services 2 hours per week, plus church celebrations 2 days per year.	17	17	17
Sickness (including caring for the sick): Based on survey period.	23	29	26
Paid work: Based on actual paid work undertaken so far this year.	72	-	36
Total other activities:	122	52	87
Social obligations			
Death: Based on 2 deaths per year in this village, each involving the equivalent of 10 days absence from productive activities; and 5 deaths elsewhere which concern Inonda people involving 3 days each.	35	35	35

income derived from cash-cropping and trading. Prestige may be an even more important motivation to the acquisition of vehicles than it is with trade stores.

Other property

As shown in Table 3 the entrepreneurs have tools to the average replacement value of $30 and equipment associated with their cash-cropping to an average replacement value of $180 - an average of $210 per man. By comparison Orokaiva people of Inonda village had only about $13 and Sivepe village about $18 worth of tools and equipment per household.[1]

The entrepreneurs all had a range of consumers durable goods far beyond that found in villages. A and B owned bicycles worth about $50 each, A and D each had a radio which cost $60 and $47 respectively, and A and D also each owned wood-burning stoves costing about $70 each. The wife of C had a sewing machine which cost $70 (not listed in the table of tools and equipment as it is used only for domestic purposes). All had kerosene lamps and three of the four had clocks or watches. The average replacement value of the above items was in the region of $125 per man. It is estimated that possessions of this kind in Orokaiva villages in which we worked would average about $10 per householder.

The houses of the entrepreneurs are all somewhat larger than the average village house, and for many years B maintained two homes - one in his coffee garden and one in the cocoa garden. D's home is much more elaborate than the others and contains crockery, cutlery and kitchen utensils worth over $50 as well as beds, chairs, tables and curtains which are almost never found among villagers. A has a modern cocoa fermentary worth $500, B has a coffee drying store and trays, estimated worth $80, and C a copra drier worth about $100.

By comparison with other Orokaiva people the entrepreneurs have few livestock, at least partly because they damage the root systems of the coffee and cocoa trees. A, B and C had none at all and D kept thirteen fowls from which he hopes to breed for commercial egg and poultry production. Householders at Inonda and Sivepe, by contrast, kept an average of two pigs and two to three fowls each.

At the request of the entrepreneurs, details of their individual holdings of cash are not included in this paper and can only be made available to researchers or to others with the permission of the entrepreneurs. All four have savings accounts, the average

[TEXT CONTINUED ON PAGE 16]

[1] Crocombe and Hogbin 1963b:44-5, Rimoldi 1966:25. Other comparisons in this section are drawn from the same sources.

262 The principal food at Ombi-Tara is taro, while other foods of importance include sweet potatoes, yams, bananas and plantain, edible pit-pit (saccharum edule) and a wide variety of leaves and bush cabbages. Bread-fruit, pandanus, betelnuts, coconuts, pine-
[224] apple, pawpaw, watermelon and sugar cane are also eaten. The main sources of animal protein are provided by wild pigs, birds, flying foxes and the occasional cuscus. These add variety but provide
231 comparatively little food. The keeping of domestic pigs in vil-
657 lages has been outlawed for health reasons by the Ilimo Local Government Council which serves Ombi-Tara, but one old man, a former clan leader, kept three pigs under his house.

342 Readily available natural vegetation provides housing materials. Timber is used for the framework and walls, blackpalm or timber for the floor, and thatched sago leaves for the roof. Houses have an average life of about four years.

162 The population of Ombi-Tara by clan and location is presented in Table 8.

Table 8

Resident population of Ombi-Tara by clan and location, January 1966

Clan	Ombi			Tara			Blocks			Total		
	M*	F*	C*	M	F	C	M	F	C	M	F	C
Humu	20	20	56	1	1	2	6	7	13	27	28	71
Kuei	3	3	7	11	8	20	-	-	-	14	11	27
Total	23	23	63	12	9	22	6	7	13	41	39	98

M* Adult males. F* Adult females. C* Children.

[166] [167] [464] Note. In addition there were seven Ombi men and six Tara men absent from the area working for wages, that is, roughly one man away for every three remaining at home.

372 sea breezes, during the dry season (May to August) drive fires across the grasslands against the forest wall.

HOUSING AND VILLAGE LIFE

342 The Yega make three types of buildings each with a separate function; the vernacular names for these buildings are *mando, dobo* and *gaga*. The *mando* is the building where a man and his family normally live. It is a well-built structure about sixteen to twenty feet by twelve to sixteen feet, set on hardwood piles, with the floor about four feet above the ground. The framework is of untrimmed bush poles about four to six inches in diameter, nailed together (the fifty or sixty cents for nails is the only cash expense in building the house). The floor is of split lengths of limbom palm, laid with the convex trunk side uppermost so that there are no splinters. Walls are made of lengths of the two inch thick midrib of sago palm fronds lashed vertically. The lashing usually leaves a space of quarter to half an inch between each pair of strips allowing any cooling breeze to blow through at all times. The roof is thatched with sago-leaf 'tiles'. The house is divided internally into two or three rooms, with a verandah in front. The entrance ladder is frequently the worst constructed part of the house. It is often rickety and dangerous, but even small children and dogs seem to negotiate it without falling. Cooking is usually done in front of the house or, in wet weather, underneath it. Some houses have a mud hearth three feet square and four inches thick, or the top of a forty-four gallon drum covered with two inches of sand, in one of the rooms to serve cooking and heating purposes. Food is cooked in a pot balanced over the fire on three stones or, nowadays, on three empty meat tins. Furniture is simple. There are no tables, chairs, or bedsteads. Sleeping mats are of woven pandanus leaf. There is often a light blanket or two, baskets and bags hang from the ceiling and in every house is a box or suitcase containing the wife's shell jewellery and the husband's ceremonial dancing finery, woven bracelets, feather head dresses, and shell and dog-teeth masks. Another box or suitcase contains the couple's

(824) (824) (417) 252 354 352 353 415

353 [415] *tapa* cloths, also worn on ceremonial occasions; often nowadays mother's best dress and father's best shorts and shirt are also kept in this box. Everyday tools—fishing spears, pig spear, bush knife, and axe—are stored between the floor joists under the floor platform. A [392] bundle of dry firewood may be stored under the house in case of a prolonged spell of wet [227] weather. The dwelling of each clan fishing-leader is easily recognized by the large seine net hung to dry under the eaves or rolled in a corner of the verandah.

342 The Yega build one other form of dwelling, a garden shelter (*dobo*) usually roughly constructed with leaf walls, frequently open at one end and often so low from floor to roof that a person cannot stand erect in it. A *dobo* is a temporary dwelling, built near the swidden in current use, and used by a man and his family for up to a week at a time while they are working in their gardens, which may be three or four miles from the village. The *dobo* is also used to shelter from rain or to take a siesta during shorter, one-day visits to the garden.

343 [461] [614] [627] [584] A *gaga* is simply a talking platform where men sit for a chat, a chew (of betelnut) or a smoke during siesta time, or after the day's work is done. There is usually at least one *gaga* for each clan in a village. The *gaga* performs an important social function for it is here that quarrels are settled, marriages arranged, and the everyday problems and business of the village discussed and finalised.

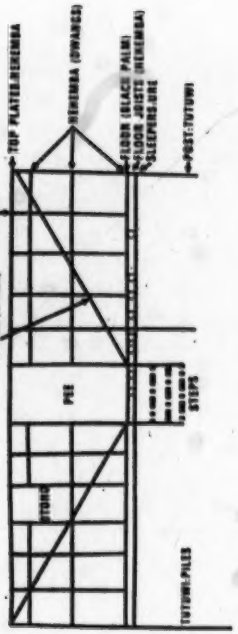
291 Everyday clothing is a pair of shorts and maybe a shirt or a singlet for boys and men, and a cotton dress or skirt for girls and women. [287] The traditional body covering for both men and women was beaten out bark-cloth of the [171] paper mulberry tree. This is used throughout the Pacific and is known as *tapa*. *Tapa* skirts and loin cloths are still worn on special occasions, such as weddings and New Year sing-sings, while many older people wear *tapa* to 323 church on Sundays. The Yega and their neigh- [289] bours are expert tapa-makers but they did not have either the suitable clay or the art of pot-439 making. They used to trade their *tapa* for pots from Ambasi, thirty miles to the north, and [178] from Wanigela, 100 miles to the south. This trade has now declined because everybody can

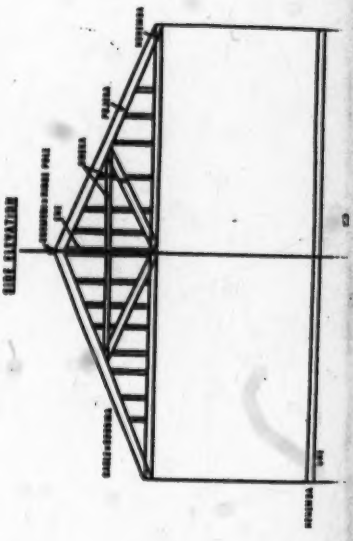
[P-11-A] [TEXT CONTINUED ON PAGE 12-4]

342

XII
House Plan

FRONT ELEVATION

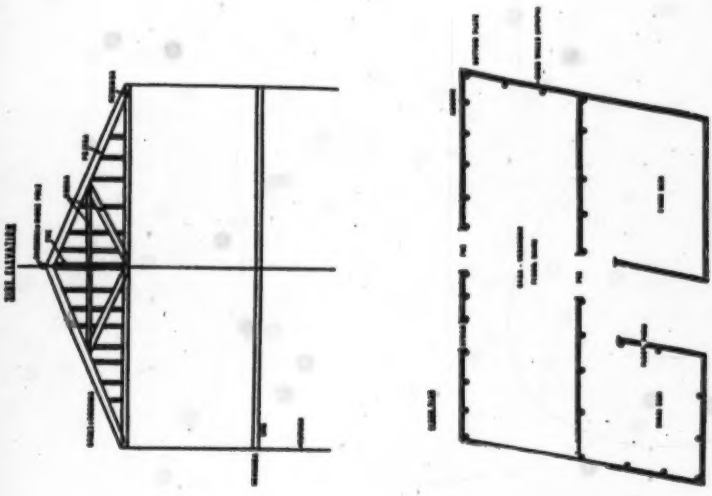




[End Map 11(A)]

22: Schwimmer E-4,5 (1966-1967) 1969 QJ23 Orokaiva QJ23
Mount Lamington

342



[End Map 11(B)]

657 Kumusi Division in which both Sivepa and Inonda are situated. It
364 would be wrong, however, to imagine that the tidiness which will strike a modern visitor to Orokaiva villages may really be ascribed to resident magistrates and patrol officers. Col. Kenneth McKay who visited these villages in 1906 reported that he saw village grounds absolutely bare of grass, being swept so clean that a man might literally eat his dinner off it (quoted in Monckton, 1922:
[462] 131-132). The sweeping of village grounds as a feminine duty is, indeed, already a subject of Orokaiva mythology.

364 Beaver, in the report already cited, sets out his concept
361 of village improvement as follows: "In the old days, doubtless, the people were careful enough not to leave food refuse about the village for fear of sorcery, but a good cleared space around the outskirts of the settlement was beyond them. There is certainly a danger that in maintaining this cleared area the people may be tempted to build their houses closer together, but I have not yet found this tendency." (1916: 49). Today, this cleared space around the outskirts is very sparing, though the privies that have become customary tend to be a few yards behind the houses and clearance extends just beyond them. There have, however, been interesting changes in housing architecture, to which I shall refer in due course. One significant change in the village "eco-system" has been the gradual elimination of the pig complex.

342 The Pre-contact house was invariably built with a pig
231 enclosure so that man and pig spent the night together. The
657 Australians lost no time in imposing the taboos of their own society: they did not object to human symbiosis with dogs; they even encouraged symbiosis with fowls but regarded symbiosis with pigs as the height of barbarism. The new house designs made no provision for them, so that they were left free to sleep under
231 the houses, or elsewhere, as they wished. Since the Local
657 Government Council was established in 1956, a vigorous campaign was conducted to eliminate them altogether. Thus, Inonda had no pigs in 1966, except for one which belonged to a Seva man who had left it with an Inonda man "to look after," and a very little one that had just been caught in the bush. When the new Sivepe was established in 1965, it was decided that this would be a pigless village; the remaining pigs were left in the old village. In practise, they wandered through the surrounding bush and gardens, so that it became useful to shoot them all as quickly as possible. Other villages, however, had not progressed so far in the direction of the pigless village ideal. Hohorita was indeed nearly pigless when I visited, but this was perhaps because a feast had been held there very recently.

657 Belshaw makes the following remarks about village development:
361 "Before the eruption, a new type of village had been established in the Kokoda sub-district, consisting of a large village square of neatly clipped grass, with houses arranged in a single row along

accept, as genuinely held by the Hohorita people at the present time, a view of history according to which the Orokaiva had only small gardens before the Europeans introduced axes and knives; it was only then that people started to make feasts, stopped eating wild fruit, etc. Here informants credited to Europeans innovations traditionally ascribed to their own culture heroes. During the same interview, I was told the people used to build houses by making a fence and putting leaves on top. The present house types, I was told, were introduced by Europeans. It so happened that this statement was substantially correct.

From these few examples (more data of the same kind could be quoted), it is already clear that the Orokaiva perceive some resemblance between the Europeans and their own culture heroes. The Orokaiva ascribe whatever cultural goods they possess to the action of culture heroes who brought them these goods in primeval time. This applies not only to material knowledge (the making of fire, houses, clothes, the growing of crops, etc.) but also to social behaviour (institutions of warfare, marriage, feasting, etc.). The Europeans manifestly brought with them innovations of the same scope. Like the culture heroes in the myths, the Europeans have many valuable new things, but they are reluctant to give them to the Orokaiva. They prefer to keep them for themselves. Occasionally, though, they do give some of them away, or are willing to trade them, or are successfully tricked into sharing them. One of the recent gifts for which the Orokaiva are especially grateful are the Local Government Councils. I asked some of the most experienced councillors whether they were able to conduct the councils according to their own ideas or were forced to follow ideas laid down by the government. I was told that the councils came "not from ourselves but from the administration. We don't know about the council. It belongs to the administration. It was given to the village people." The council was given much in the same way as fire had been given by a culture hero.

Beneficial though the Europeans undoubtedly are, they are also perceived as exasperating and dangerous: exasperating because of their refusal to share their goods, to set up proper relationships with the people and to adopt proper customs; dangerous because of the power of the police, the prisons, and--most of all--the Christian God. It is from this viewpoint that we should regard the Orokaiva interpretation of the Mount Lamington eruption as reported by Belshaw and Keesing. Belshaw reports that most Orokaiva explanations of the eruption were religious in nature: "Some people said that this was God's visitation because they had disobeyed the Bishop's instructions to build new churches. Others said that God had punished them because they had not helped the Allies sufficiently during the war and because some of them had betrayed missionaries to the Japanese . . . This sense of guilt is a most important factor in resettlement attitudes." (1951: 242) Keesing agrees with this summary, adding that the eruption resulted in "strong feelings of insecurity and even of guilt in their

177 Housing and village improvement: The changes in this aspect of culture are capable of fairly precise description, which has been provided in Table 10.A This table applies to Sivepe only; I shall refer to some minor differences between Sivepe and Inonda at the end of this section. 335 The changes may be analysed into several main types. First, there is 412 the extent to which European materials and tools are used. Here, we note 177 that nails were a building material as early as 1951 (and therefore also hammers), but a significant change has been the extent of their use. The introduction of nails was partly a time-saving device, as framing can be efficiently lashed together with the bark fibres traditionally used. On the other hand, the "timber" walls might not be easy to lash together and nails are probably necessary here. On the other hand, the blackpalm or betelnut which is used for the floors does not take nails at all well and the lashing is a superior technique, 177 used in almost all the houses. Secondly, there have been changes in 342 house design, and the use of materials. The increase in house size, which was the most striking of the innovations, was general throughout the village, according to a standard set by the leader and adhered to by everybody. The change from betelnut to blackpalm flooring is towards a superior, toughter material, harder to work and comparatively rare in the Sasembata district. The change from sago to "timber" walls was purely a matter of aesthetic fashion. I was told by Mr. Sebire that it started in the early 1950's in the Kokoda district; in Sasembata district it does not seem to have started until around 1965. The new houses at the mission station had "timber" walls; so had the new houses in several other nearby villages. Sivepe, being built on a new site after the fashion started was wholly built in "timber" (except for a few houses shifted from the old site and standing on the new one and gradually replaced). The "timber" looks like weatherboard, [335] which has been used on Australian houses in the Kokoda district. It is cut from logs sawed to a length of six feet, which are then split into shingles with a bushknife, a procedure which takes much time and skill. The six feet long shingles are generally 3/8 inch thick and five inches wide. The intention is to overlap them, providing better protection against wind and rain than the sago walls have. The work of cutting the shingles is so arduous, however, that the overlap is usually quite small when the houses are built; as the logs are split green, the timber shrinks until cracks appear between the boards.

177 The third type of change is that actually advocated by European [342] authorities. (The timber walls, according to administration officers, were a purely Orokaiva idea.) For reasons of hygiene, the administration wanted the houses to have windows, which traditionally they did not have. The new houses have large windows, but they are all blocked up with boards (to keep the wind and rain out) so that they are not functional, [364] except in warding off criticism from Australian officials. The village improvement measures: elimination of pigs, lavatories, rubbish holes, [351] pens for chickens; are all based on European advocacy. The neat lines of crotons and other shrubs, which are beginning to form a standard

A [See Cat. 116, p. 215--Analyst]

part of village layouts, are a blend of Papuan tradition (the Orokaiva have always been very fond of flowers and planted ornamental shrubs) and a new Australian-derived passion for military regularity. This is evident especially in the emphasis placed on building the houses in a line, and equidistant; the shrubs are also rigidly in line.

The changes are to some extent due to the experience of Ilimo camp which is reflected in the style of Old Sivepa. The changes found in New Sivepa are due to subsequent influences, mainly that of the Local Government Council. Once village improvement became an ideologically validated objective, the way was open to the adoption of further innovations borrowed from the Kokoda district, such as the use of "timber." I did not see "timber" used East of the Sasembata district.

It may well be that the increase in house size, coupled with the present need to build a large number of houses in the same year to form a major modern village, would rapidly have led to a critical shortage of sago in Sivepa if people had continued to use this material for walls. Thus, the present practice of using timber instead of sago could well have an economic explanation. Sago roofs can be built without destroying the plants, whereas plants have to be cut entirely to produce sago walls. I was not, however, given an economic explanation for the change-over to timber; I was told only that it was better-looking and provided good protection against wind and rain. But nobody would say anything against sago; sago walls are "also very good."

Tools and skills: Traditional agriculture has undergone considerable change, as elsewhere in New Guinea, by the introduction of steel axes, bush knives, grubbers etc. Thus the preparation of the soil for gardening has been greatly facilitated. There has, however, been no change in the operations concerned with the plants themselves, planting and harvesting being done with wooden digging sticks. Many of the men have had experience in rubber plantations, with operations such as tapping; there are a few tapping chisels in the village. Training in coffee cultivation occurred after the eruption, but it was not until a few years ago that hulling machines were introduced. Every grower at Sivepa has, as far as I know, only one coffee sack. The basic skills needed to bring rubber and coffee to market have been mastered, but up-to-date techniques for improving the yield of the trees have not been mastered. The difficulty, in this respect, is not purely one of communication, as men who have been employed as rubber tappers must be familiar with certain rules regarding care of the trees which are definitely not being practised. Similarly, I doubt whether one can explain failure, on the part of Sivepa growers, to prune their coffee trees by ignorance of pruning techniques. The true explanation would appear to be a lack of confidence that the rules make any difference to the yields. In Hohorita people began to prune their coffee trees when they discovered they were then easier to harvest. But the whole pattern of reasoning upon which Western horticultural practises are

625 excursions. This was, however, an experience of short duration and,
731 once back in Sivepe, the village constable reverted to his former role, as described above. In 1956, all village constables handed back to the government their handcuffs, the symbol of their authority, and the Local Government Councils took over.

[685] With regard to interpersonal relations, the evacuation set up
[571] a mutual distrust due to the removal of certain social controls. Theft is comparatively uncommon in Orokaiva villages, but this is because property is extremely well-guarded and everyone in the village is constantly under observation by other villagers. The idea of villages being left unguarded was repugnant to Orokaiva, and fear of prowling had to be countered by strict control on the part of village constables over anyone entering the restricted area. I could find no evidence of a change in interpersonal relations beyond the period of evacuation.

476 The Orokaiva are not often observed to work in groups; from
571 the relatively acephalous structure it may already be inferred that they do not have regular work leaders controlling groups. Most gardening is done by each extended family separately; house building is done by the prospective occupants with the help of some individuals who feel an obligation, mostly a brother or brother-in-law. Even at feasts, there is a minimum of truly communal labour: the food is supplied by individuals who deliver it to the display platform and it is only the dancing, the ceremonial and a few minor construction tasks that may be communal. There are in Sivepe two yam gardens where work is communal; these are in sharp contrast to all other garden work. Yet people readily gather for common efforts which have a festive and ceremonial nature or enterprises which arouse an episodic enthusiasm. Examples are the communal fishing and hunting expeditions, projects such as the mission hospital or the marking of the ward boundary.

Even during these communal episodes, the tendency is for each small group to perform a certain task separately, though contemporaneously. A hunting party splits up into family groups who do not meet again until the hunt is over. In fishing each group has its own spot. Similarly in the building of new Sivepe, there was little that was overtly communal, as each small group was working on a house for themselves or a close kinsman. Nonetheless, one would be wrong to
[342] describe this pattern as Individualistic. After all, every house was
[177] in the same style and of the same size--and this was not wholly a "traditional" style; it was a style introducing new materials and an increase in size of about 50%. When such a change is made by everybody who builds a new house, this indicates that the group is strongly bound by collective decisions.

177 Unwittingly, the Australian government has tended to make the
654 Orokaiva more oriented towards group work than he was before. Road
571 work, the compulsory planting of rubber trees, compulsory resettlement in larger villages--all these added to the volume of group work while the volume of individual work remained constant within the villages.

361 bende--"side" of a village. The term da is applied to the total set
621 of houses built in a single jungle clearing. The layout of a da
usually resembles that given in Maps V-VIII.[A] There is an empty space
in the centre, which is faced by houses, usually arranged in something
[364] like parallel rows. The centre is called araha. In the traditional
village there is an area, immediately surrounding the da which is
given over to sorcery and where the rubbish is thrown. This is called
isapa, a word also meaning "small" and it is indeed only a narrow
strip, outside which the village gardens begin. The word da is applied
equally to a large village and to a settlement of two or three houses,
as long as it has the features mentioned. The house or bende, if it
is a permanent dwelling, is part of a da and mostly is placed on one
of the two sides or rows (bende), though as the village plans show,
houses are also built to complete the rectangle.

The ridgepole of a house tends to be erected along the line
361 made by the row or bende. The floor plan is rectangular, as shown in
342 Diagram XII.[B] The long side of the rectangle faces the araha and the
door is usually in front in the centre. The house tends to be divided
into two halves, a front half and a back half, the division being a
wall built directly below the ridgepole. The front half tends to be
a space where people sit and talk and where visitors come in the
evenings, while the back half, containing the sleeping rooms, is
rather more private and not usually for visitors. The back portion is
often divided into two separate rooms. I have already referred briefly
to some buildings that are not residences: the small ceremonial meeting
places that are called arara in Sivepa, jataka in Hohorita or by either
name in Inonda; the lavatories, the chickencoops (very often, indeed,
the same structure); the feasthouses and visitors' sun shelters, which
are temporary; and the women's club houses which are a novelty. None
of these are usually placed in the regular rows, though sometimes
meeting places are built next to the house of the owner.

Villages are rather compact, the houses being built at a
361 distance of nine yards, and this distance is precisely measured in the
[197] Australian spirit of military regularity. Everyone is always within
easy shouting distance of everyone else; nothing in the village goes
unheard, unobserved. The two "sides" are under constant observation
of one another. Movement between the houses of one side is much less
conspicuous, however, than the act of crossing the araha to go to
the other side. One never does this unless one has a serious reason.
Movement between houses of the same side occurs continuously for
ordinary gossip.

Inonda formed one da after some battles early in the century
361 (Crocombe and Hogbin, 1963: 14-15); at the time of the eruption there
731 was one da with 48 people and the village stayed together, with a slight
628 decline in population (to 45 in 1962 and 41 in 1967) and a decline in
the number of houses from 12 in 1950 to eight in 1962 and seven in
1967. When the Sewa people joined Inonda after the eruption, they did
not actually, according to informants, live in the same village as the

A [See Cat. 116, pp. End Map 5-End Map 7--Analyst]
B [See Cat. 116, pp. End Map 11(A)-End Map 11(B)--Analyst]

361 conceived as part of it. (People spoke of the residents as living "in Sivep," not "in Orinasusu.")

In the new village, the number of houses built outside the regular rectangular plan was even larger. Of the 25 houses, only 14 were strictly where they were supposed to be; a further three dwelling units might be considered "in line" if the term were used very broadly, but eight formed a line of their own, roughly parallel to the two planned rows, with doors facing towards the araha. This line was on more elevated ground than the rest of the village, and about [182] two chains behind the nearest planned row. The decision of all these householders to build outside the regular rows is in part explainable by features of the kinship structure, to which I shall refer later. We should not ignore, however, certain historically and psychologically determined attitudes which resisted the regular village pattern. In this connection it is significant that in only five out of 11 cases the irregularly placed houses were built on land to which the occupants had some special claim. Houses that were out of line were at first all of much lower standard in size and construction.

Because of the very close scrutiny the inhabitants of a village give to one another, as well as the numerous regulations that are now being enforced in villages, Orokaiva feel the threat of regimentation implicit in the large resettlement villages. Even the small distance of two chains provides a valuable measure of detachment for people many of whom used to live in much smaller villages and managed to evade most of the modern regulations. One man ceded to pressure and built a house in the "line" in which he placed his daughters-in-law and their offspring but he stayed in the old house on the hill. There was much criticism too of the unwillingness of one man on the hill and the owner of the detached house No. 8 to clear the tall weeds between their houses and the rest of the village. I feel sure they let these weeds grow with the specific purpose of emphasising the distance. It was generally agreed (and confirmed by Mr. Waddell's data) that these two men were among the most diligent gardeners in the village, so that "laziness" provides no explanation.

● [342] A further dimension of freedom is always available to Orokaiva by the institution of the "garden house." A garden house is a rough shelter where people can sleep in the heat of the day while they are at their gardens. Some garden houses, however, are good, sound structures suitable for semi-permanent residence. Sometimes people stay at them overnight, sometimes for several nights in succession. This is done at times when there is a great deal of garden work urgently needed; by staying at their garden houses people save time and avoid distractions. It is also done when there has been a quarrel and people like to stay out of sight for awhile; finally, it may be done simply for reasons of privacy. Some men stay at garden houses far more frequently than others. One Sivepe man is staying there constantly and has no village house at all, nor did he have one in Old Sivepe. Generally, stays of more than one week at one time are most unusual. Most people never stay away for longer than one night.

22: Schwimmer E-4.5 (1966-1967) 1969 QU23 Orokaiva QU23 Mount Lamington

TABLE 10

CHANGES IN HOUSE DESIGN,
HOUSE CONSTRUCTION AND
DOMESTIC AMENITIES IN SIVEPE, 1936-1966
(Comparison between standards reportedly applied
on four successive village sites)

Elements	1. Pusahambo (pre-war)	2. Pambe (between war and eruption)	3. Old Sivepe (after eruption, until 1965)	4. New Sivepe (1966)
Floor level	Raised on posts	Raised on posts	Raised on posts	Raised on posts
Flooring material	Betelnut, wide gaps	Betelnut: no gaps	Some betelnut, some blackpalm	Some betelnut, some blackpalm
Windows	No windows	No windows	Small windows	Large windows
No. of rooms	Three	Three	Three	Three
Walling material	Split sago	Split sago	Split sago	"Timber"
Nails: framing	Nil	Younger people	General	General
Nails: walls	Nil	Nil	Nil	General
Shrubs	Beside houses	Beside houses	Beside houses	To mark paths
Betelnut	Planted	Planted	Planted	Planted
Coconut	Few	More	More	More
Waste disposal	In gully	In gully	In gully	Rubbish holes
Pigs	Present	Present	Present	Absent
Hen houses	Absent	Absent	Absent	Pens built
Lavatories	Absent	Absent	A few	General
Floor area	"Very small"	"Bigger"	"Much bigger again" (200 sq. ft.)	"Big" (375 sq. ft.)

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